

CLAIMS

What is claimed is:

1. A clip for repair of a heart valve having leaflets, said clip substantially restraining the motion of the leaflets, said clip comprising:
a plurality of resilient, flexible legs arranged substantially lengthwise adjacent to one another, each of said legs having a first end adapted to attach to one of the leaflets and a second end opposite said first end; and
a common attachment located at said second ends of said legs, said second ends being attached to said common attachment, said first ends of said legs being flexibly movable away from one another and capable of receiving the leaflets therebetween, said legs further being resiliently biased toward each other for engagement of each of said first ends with one of the leaflets for attaching said clip thereto.
2. A clip according to Claim 1, wherein said common attachment comprises an elongated ferrule.
3. A clip according to Claim 2, wherein said elongated ferrule comprises a bore extending lengthwise therethrough.
4. A clip according to Claim 3, wherein said bore is threaded.
5. A clip according to Claim 1, wherein said common attachment comprises a wire segment formed in a reverse bend.

6. A clip according to Claim 5, wherein said legs comprise additional wire segments integrally formed with and extending from said wire segment forming said reverse bend.

7. A clip according to Claim 1, wherein said common attachment comprises a wire segment formed into at least one loop.

8. A clip according to Claim 7, wherein said loop is oriented substantially parallel to a plane defined by said legs.

9. A clip according to Claim 7, wherein said legs comprise additional wire segments integrally formed with and extending from said wire segment forming said loop.

10. A clip according to Claim 1, further comprising a plurality of hooks, at least one of said hooks being attached to said first ends of each of said legs and projecting outwardly therefrom, said hooks for engaging said leaflets for attaching said legs thereto.

11. A clip according to Claim 1, further comprising a substrate attached to at least one of said legs, said substrate being engageable with said leaflets and having pores therein to facilitate tissue growth from said leaflets onto said substrate for attachment of said legs to said leaflets.

12. A clip according to Claim 1, wherein each of said legs comprises an elongated wire loop.

13. A clip according to Claim 1, wherein at least one of said legs comprises a spiral-shaped wire segment positioned at its free end, a hook being positioned on said segment and extending outwardly therefrom, said hook being engageable with said leaflet for attaching said leg thereto.

14. A clip according to Claim 1, further comprising a pair of magnets, each one of said magnets being positioned substantially at said first end of one of said legs, said magnets being positionable in opposition to one another on opposite sides of said leaflets, said magnets being attracted to one another for securing said clip thereto.

15. A clip according to Claim 1, wherein said common attachment comprises a cylindrical shell.

16. A clip according to Claim 15, wherein said legs comprise a flexible mesh defining a plurality of interstices positioned along said legs.

17. A clip for repair of a heart valve having leaflets, said clip substantially restraining the motion of the leaflets, said clip comprising:

a ring;

a pair of resilient, flexible legs arranged substantially lengthwise facing one another, each of said legs having a first end adapted to attach to one of the leaflets and a second end attached to said ring, said legs being attached to said ring substantially diametrically opposite to one another;

a pair of actuating projections attached to said ring substantially diametrically opposite to one

another, each of said actuating projections being substantially aligned with one of said legs and extending in a direction opposite thereto, said first ends of said legs being flexibly movable toward and away from one another for receiving the leaflets therebetween when said actuating projections are moved respectively away and toward each other.

18. A clip according to Claim 17, wherein each of said legs comprise an elongated closed loop extending from said ring.

19. A clip according to Claim 17, wherein each of said legs has a hook mounted substantially adjacent to said first end, said hooks adapting said legs for attachment to said leaflets.

20. A method of repairing a heart valve having leaflets by restraining the motion of the leaflets substantially at a point, said method comprising the steps of:

providing a clip comprising a plurality of resilient, flexible legs arranged substantially lengthwise adjacent to one another and resiliently biased toward one another, each of said legs having a first end adapted to attach to one of the leaflets and a second end opposite said first end, said clip further comprising a common attachment located at said second ends of said legs, said second ends being attached to said common attachment;

flexibly moving said first ends of said legs away from one another;

positioning said legs with the leaflets therebetween and said common attachment adjacent to said leaflets; and

allowing each of said first ends to be biased into engagement with one of the leaflets and thereby attaching said clip to the valve, said common attachment being positioned substantially adjacent to the leaflets and defining the point at which the motion of the leaflets is substantially restrained.